REASONS FOR ENCOUNTER AND DIAGNOSES AT PRIMARY CARE LEVEL IN THE NORTH WEST PROVINCE : A PROSPECTIVE CROSS SECTIONAL SURVEY.

SUBMITTED BY

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YEAR: 2010

ACKNOWLEDGEMENTS

My sincere gratitude goes to the participants who sacrificed their precious time to participate in this research. I will like to thank the North West Department of Health, North for the permission granted to use the facilities in the province for this research. the facility managers who granted access and support during the data collection period are all appreciated. For the invaluable guide rendered by my supervisor and all the administrative members of staff of the Department of Family Medicine, and the statistician, university of Stellenbosch, I say thank you. In particular, I will like to thank my family for their invaluable support during this study. My ultimate gratitude goes to God.

RESEARCH DECLARATION

I, the undersigned, hereby declare that the work contained in this assignment is my original work and that I have not previously submitted it, in its entirety or in part, at any university for any degree.

Signature: .....Dr Adejayan.. Date: 29/11/2010

SUMMARY

Introduction

Primary health care in South Africa is predominantly provided by clinics and Community Health Centres (CHC). These primary care facilities are situated in the community to ensure accessibility to care. [1] As part of ensuring quality planning, implementation and transformation of the health system, good knowledge of which cases are prevalent at our primary health facilities is important. Thus the rationale for this study as to know what are the reasons our patients come to our facilities and which diagnoses are made by the attending health care workers based on these reasons.

Aim

The aim of this study was to describe the spectrum of clinical and non-clinical problems encountered and the diagnoses made at our primary care facilities in the North West province of South Africa.

Methods

A prospective, cross-sectional survey at 19 Clinics and 5 Community Health Centres in 4 sub-districts of the Ngaka Modiri Molemma District of NW Province, South Africa.

The International Classification of Primary Care-Version 2 (ICPC-2) was used to code data on selected days over a 10-month period from patients presenting at the participating clinics and community health centres.

Results

In total, 5082 patient encounters were recorded of which 3438 (67.7%) were females while 1644 (32.3%) were males. The category with highest reasons for encounter (RFE) was the general and unspecific component with 16.5% (n = 1202), followed by the respiratory component at 14.7% (n= 1066) and the cardiovascular

component at 12.1% (n=882). The most common diagnoses were in the general component at 16.5% (n= 981) followed by cardiovascular at 16.0% (n= 951) and the respiratory component at 14.5% (n= 865).

The average numbers of RFE was 1.4 per encounter among females and 1.5 amongst males. Diagnoses per encounter averaged 1.2 among females and males. Younger people under 40 years of age 67% (n = 3409) and females 68% (n = 3438) made up the majority of encounters.

Conclusion

Of all the health care facilities surveyed, there were mixtures of RFEs and various diagnoses of mixture of disease components. There were very few patients that came to the facilities for administrative purposes. Majority of the attendees were women. Collection of hypertension medication was the most common reason for encounter (RFE) with uncomplicated hypertension being the commonest diagnoses while psychosocial and problems related to male genitals were the least RFEs. There were more RFEs presented by patients than the diagnoses made by the attending HCWs. The ICPC-2 is a very user friendly tool that can be successfully utilised to monitor encounters and diagnoses at any health care facilities.

KEY WORDS – Primary Health Care, Reasons for Encounter (RFE), Diagnoses, International Classification of primary Care (ICPC-2), South Africa

1. INTRODUCTION

1.1 BACKGROUND

The South African healthcare landscape is undergoing considerable transformation, driven by the global emergence of new healthcare challenges as well as the South African government's commitment to improve the country's healthcare system since the end of apartheid in 1994. The public sector's primary care serves as the entry point into healthcare for the majority of South Africans, especially the poor and those living in the rural areas. It is staffed mainly by nurses, who are currently in short supply nationally.[1] The primary health care (PHC) system on the other hand is the strategy adopted by the government as stipulated at the Alma Alta declaration whose principles are to ensure provision of equitable, accessible, affordable scientifically sound and quality health care to the population at various level of care depending on the patients' needs.[2] Despite the government's commitment to improving health, the healthcare system is labouring under a quadruple burden of diseases comprising infectious diseases, like HIV/AIDS and tuberculosis; emerging chronic non-communicable diseases, like hypertension, violence and trauma; as well as maternal and child health.[3]

PHC needs to be revitalized to cope with this burden of disease and will remain challenged unless a clear approach to disease management at the first level of care is defined and implemented. Key to formulating and implementing a sound management is acquiring knowledge of the case mix of diseases and conditions afflicting the population, in particular those seeking help from primary care facilities.

There is shortage of published data on reasons for encounter (RFE) and diagnoses made in primary care in South Africa. The most common reasons for patients visiting our primary care facilities are because of ill health, but RFE can also be for administrative reasons, physiological reasons (like pregnancy), preventative interventions (like immunisation) or because the patient was asked to return by the health care provider. The term "reasons for encounter" is therefore broader than just symptoms or complaints of ill health and is more inclusive of the reasons for attending primary care facilities. However, it is useful to understand the range of complaints and problems that present, since symptoms determine diagnoses and subsequent management in the primary care setting. Often patients present

with more than one symptom and will be diagnosed with more than one diagnosis, and facilities therefore need to offer comprehensive and integrated services. Practitioners, health system managers, and certainly educators and guideline developers, ought to have such knowledge in order to plan for health services and develop evidence-based protocols for an integrated approach to these symptoms and diagnoses. Traditionally, medical teaching in South Africa takes place in the hospital and medical textbooks are written based on what is experienced in the hospital ward especially at tertiary settings. Consequently, graduating medical students and nurses are neither familiar with nor well-equipped to deal with novel and often complex complaints seen at primary level, where the majority of the population meets healthcare for the first time. It is therefore essential that doctors and nurses are not only trained in the traditional 'academic teaching hospital' but also in the primary care facilities.[4]

1.2. RATIONALE FOR THE STUDY

Few of our clinical guidelines are syndromic, that is based on the presenting symptom(s), and most are focused on the management of specific diseases. The development of more functional and integrated guidelines (considering multiple possibilities) to assessment and management requires knowledge of the reasons for encounter and diagnoses made at public primary care facilities. Furthermore, patients tend to present with multiple reasons for encounter and diagnoses and need a comprehensive model of care. The range and prevalence of typical or common symptoms in primary care in different geographical locations needs to be known before guidelines can be considered locally adapted. Such knowledge also informs planning for comprehensive patient management by facilities. A study of RFE and diagnoses in primary care will contribute to appropriate training of primary care providers, understanding the burden of care at primary care facilities and enable the production of syndromic guidelines that assist with assessment and management.

The North West (NW) Department of Health is faced with the task of developing a unified health system, which is able to deliver efficient, high quality primary care in a caring environment to all citizens of the province. The best way this can be achieved is to know the RFEs and diagnoses made at our primary care facilities in the province, thus the importance of this study.

1.3. NORTH WEST PROVINCE - AN OVERVIEW

The North West Province (NWP) of South Africa is bounded on the north by Botswana, on the south by the provinces of Free State and the Northern Cape, and on the northeast and east by the Limpopo Province and Gauteng and covers 118,797 sq km. The mainstay of the economy of North West Province is mining, which generates more than half of the province's gross domestic product and provides jobs for a quarter of its workforce.[5]

The population of the province is estimated at 3.6 million (7%) of the national population, of whom 51% are women and 49% men. Sixty five percent (65%) of the population in the province live in rural areas and only 35% of the population is urbanised.

The province is one of the 'rural' provinces in the country. The distribution of medical practitioners is 24.6 per 100000 population in the North West Province.[5] North West Province (NWP), like other provinces in the country, follows the district health system (DHS).

The 2005 General Household Survey showed that only 426000 (about 11%) of the population in the province are covered by medical aid. This means that 89% of the population depends entirely on the public health sector to receive health care.

1.4 AIM & OBJECTIVES

The key aim of this study was to determine the range and frequency of reasons for encounter and diagnoses found among patients attending public primary care facilities in the North west Province.

Primary objectives

- To enumerate all reasons for encounter (e.g. presenting symptoms) in patients seen at primary level facilities.
- To enumerate provider-reported diagnoses (pre-existing or new) of patients seen at primary level facilities.

Secondary objectives

- To estimate the average number and range of reasons for encounter per patient
- To estimate the average number, and range of provider-reported diagnoses per patient
- To describe the case mix of reasons for encounter and the diagnoses in relation to:

- Age of clients
- Sex of clients
- Type of provider (doctor or nurse practitioner)

2. LITERATURE REVIEW

2.1 CONTEXT OF PRIMARY HEALTH CARE

Primary health care (PHC) is one of the pillars of the health care system in this country like most other countries in the world. Primary care facilities form the entry point into healthcare for the majority of South Africans. By improving the diagnoses and management of patients at this level, it will have a positive snowball effect on the rest of the health care system.

Studies of the value of health services have concluded that approximately half of the improvements in the health of populations in the past half century are attributable to health services, with other factors (geography, nutrition, public health measures) accounting for the remainder.[6] The benefits of functional PHC are greatest for the causes of death and morbidity that are especially amenable to primary care interventions. These conditions include hypertension, diabetes, cerebro-vascular accidents (stroke) and years of potential life lost. These findings are consistent and found in international comparative studies.[7]

PHC, as the underlying philosophy for the provision of health care services in the DHS, is defined as comprehensive care that includes preventive, promotive, curative and rehabilitative care within the context of, amongst others, community participation and intersectoral collaboration. The basic principles of primary health care include:

- Health as a fundamental human right
- Equity and social justice
- Self reliance
- Community involvement in health
- Intersectoral collaboration.

The strategic approach to transformation of the health system since 1994 was primarily focussed on the establishment of the district health system (DHS) based on the principles of

primary health care, in accordance with internationally accepted principles as defined in the Alma Ata Declaration of 1978.

First contact care is important in minimizing costs and improving outcomes if quality care is provided.[8]

2.2. REASONS FOR ENCOUNTER AND DIAGNOSES

In medicine a reason for encounter is a symptom, disorder, request or concern expressed by the patient when seeking care. If the patient is unable to express themselves, the healthcare professional may make assumptions based on information from carers and initial observation. Patients usually have a list of symptoms or complaint(s) that they wish to be investigated or managed for. The doctor or health professional may later record a diagnosis elsewhere in the patient record.

The RFE is recorded from the patient's perspective and language and depending on the situation and the provider's preference, it may be summarized according to a standard coding system or written in the patient's own words. Whatever system is used, the recorded RFE should accurately represent the patient's explanation for seeing the doctor.[9]

In the primary care setting, common RFEs relate to preventive care, needing a prescription refilled, symptoms related to infections, or concerns about conditions like diabetes mellitus, high blood pressure, or mental disorders.

RFE codes may also be used by electronic medical decision support systems to assist diagnosis. Other words that can be used synonymously with RFEs are:

- Presenting problem
- Problem on admission
- Reason for presenting

Locally, there were few studies done on the RFEs and diagnoses in primary care. For example, a study done in Mthatha focused only on economically deprived areas and community health centres,[1] while the one conducted in Soweto focused on general practitioners in private practice.[10]

There have been more studies done internationally when compared to South Africa (SA) but they are not without some limitations. A study done in Europe focused on the role of family practice in various health systems in different countries while the one conducted in Belgium focused on prisoners.[11,12] A study done in Melbourne, Australia, focused only on asylum seekers / refugees.[13] Another study done in Paris and the French-speaking part of Belgium focused on teenagers only while this same study and the one done in Sydney, Australia aimed at comparing the RFEs as given by the patients with those given by their general practitioners.[14,15]

Most of the studies above sampled very few encounters and participating health care workers (HCWs) were mainly doctors. This picture is different from South Africa's (SA) context where most of our health care workers at primary care level are nurses. As much as samples in the above studies were small, a few studies like the one conducted in China, involved a very large number of encounters but data was only collected during the winter season.[16]

With this survey reported here, there was no restriction on age, no particular group of people to be sampled, and it included everybody that received care at the primary level of care. As such this study can help all the stake-holders to appreciate the common, important RFEs and diagnoses as well as the burden of diseases at various primary care facilities in the province.

2.3. HUMAN RESOURCE DISTRIBUTION CONTEXT

One half of the global population lives in rural areas. These people are served by only 38% of the total nursing workforce and by less than a quarter of the total physicians' workforce.[17]

Without local access to well trained and motivated health workers, it is unlikely that communities will have access to important primary health care services to respond to priority health needs and to achieve the Millennium Development Goals (MDGs).[18]

Major tensions in health care exist between the health of the individual patients that enter our consulting rooms versus the health of the larger community (the population).[19] By knowing the RFEs and diagnoses as well as the burden of disease (BOD) we are faced with in our public health sector, some of these tensions could be addressed.

In the 1990s, South Africa was one of the few countries in the world where wholesale transformation of the health system began with a clear political commitment to, inter alia,

ensure equity in resource allocation, restructure the health system according to a 'district health system' (DHS) and deliver health care according to the principles of the primary health care (PHC) approach. [20] This transformation and achievement of the planned equity would be better achieved if we know the extent and distribution of the various RFEs our patients present with.

Of special relevance to less economically developed countries is evidence that primary care produces equity. One of the earliest studies done in developing countries shows that the distribution of primary care services is much more equitable than are those for health services in general.[21] In developed countries, primary care-oriented health systems (such as Community Health Centers in the United States) are associated with lower percentages of low-birth-weight infants and more years of "healthy life". Areas with more primary care physicians have lower stroke mortality and postnatal mortality rates, particularly if the areas also have large income inequalities.[22] The department of health in the province is regulated by the National Health Act, Public Service Act, Basic Conditions of Employment Act, to name a few. The guiding principles are those contained in the central principle of service to the people/ people first, popularly known as 'Batho pele principles'.[23] These encompass the following principles:

Consultation; Service standards; Access; Courtesy; Information; Openness and transparency; Redress and Value for money

To achieve the above equity and quality health care delivery as evident by previous studies especially those done in the developed countries, good mix/grid of RFEs will be imperative.

2.4. ICPC–2 SYSTEM

Internationally, the focus of The International Statistical Classification of Diseases and Related Health Problems (ICD) was shifting from mortality towards morbidity, and thus the reasons to visit a doctor became of more interest to be able to manage the causes of such morbidity appropriately.

The trial version of the Reason for Encounter Classification contained approximately 700 classes.[24] Included were 200 symptoms, complaints, concerns, fears and psychosocial problems not previously available in ICD-9 as patients often formulate health problems as symptoms and complaints. In addition, they sometimes formulate their problem as a diagnosis

(I'm here to collect my medication for diabetes), so most diagnostic classes of ICD 9 and ICD 10 were also included in the new ICPC classification. Such RFE could be given by patient as " I would like a prescription, a referral, a blood test; would you please measure my blood pressure, or listen to my lungs".

3. METHODOLOGY

3.1 STUDY DESIGN

A multicentric, prospective, cross-sectional survey.

3.2. SAMPLING

The province is divided into five regions politically, but into 4 health districts: Bojanala, Bophirima, Dr. Kenneth Kaunda and Ngaka Modiri Molemma.

Ngaka Modiri Molema (NMM) district formerly known as the central district is divided into 5 sub-districts: Mafikeng, Ditsobotla, Ratlou, Ramotshere-Moiloa and Tswaing. This consisted of 1 urban (Mafikeng) and 4 rural sub-districts. NMM district was chosen for this study because it is a good representative of the province, having combined both urban and rural settings in a combination reflective of the province (more rural than urban settings).

All the sub-districts, except for Tswaing, were selected for the study. Tswaing was excluded because from statistical analysis of the province/district, 4 sub-districts (I urban and 3 rural) were to be selected randomly.

Primary care facilities (health centres and clinics) were listed from the 4 selected sub-districts and 26 were randomly selected for inclusion in the study. The MRC Biostatistics Department recommended a sample size of 6000 patients and selection of facilities was weighted in terms of the population served in each sub-district and the size (workload) of the facilities to ensure a sufficient sample size was obtained. A total of 24 facilities eventually participated, which comprised of 19 clinics and 5 CHCs. (Appendix B). The distribution of selected facilities is shown in Table 1.

TABLE 1 - FACILITIES DISTRIBUTION BY SUB-DISTRICTS

SUB-DISTRICT	NUMBER OF FACILITIES (n)	PERCENTAGE (%)
MAFIKENG	10	41.7
RATLOU	7	29.1
DITSOBOTLA	4	16.7
RAMOTSHERE-MOILOA	3	12.5
TOTAL	24	100.0

At each of these facilities, primary care providers were invited to participate in collecting data. Sixty two (62) providers consented to participate (2 per clinic and 4 per CHCs), but only 58 eventually participated while the remaining four, who were doctors could not follow through because of time constraints when they visit the primary care facilities.

Each provider collected data on all consecutive patients on 5 separate days. Days were chosen to represent all days of the week and were 2-months apart to ensure all seasons were included.

3.3. RESEARCH INSTRUMENT

The research instrument utilised (data collection sheets) contained bio-demographic information (age, gender), the facilities name, section(s) of the facility attended, day of the week, date, but no name or other information with which any patient could be linked. Main areas on the sheet were the areas containing the RFEs from the patients and the diagnoses made by the attending health care workers. Maximum of 5 RFEs and 5 diagnoses were allowed for. This

value was chosen due to the fact that very few patients, if any, would present with more than 5 RFEs and few health care workers, if any, would arrived at more than 5 diagnoses. Thus with this set maximum value, all the RFEs would be obtained from the patients and would invariably results in a better perspective of the burden of disease at the primary care level.[25,26]

The participants recorded information on all consecutive patients seen by them on the days agreed for data collection.

3.5 – PILOT STUDY

Prior to conducting the actual fieldwork, the research instrument was pre-tested at Montshioa Stadt CHC. This facility was chosen as it was easily accessible in town. Over a 4 hour period, 6 of the data collection sheet were given to 3 professional nurses, 2 Clinical Nurse practitioners (CNPs) and one with no post basic training.

Based on the outcome of the pilot, it was realised that the research instrument was user-friendly although the participants construed RFEs to be symptoms the patients come with oblivious of the fact that administrative reasons and preventive reasons could be seen as RFEs. This and other issues that arose were addressed during the general meeting/training sessions with all the other participants.

3.6. TRAINING OF THE PARTICIPANTS/ RESEARCH ASSISTANTS

Prior to the first set of data collection, training of the participants was conducted by the principal researcher and consent was obtained from all participants. The focus of the training was on how to record RFEs and diagnoses. It was clarified that the RFE that participants were interested in could be collection of medication, immunisation, administration like sick note, grant form, any reason that brought the patient to the facilities not necessarily because of pathology/sickness.

3.7. DATA COLLECTION

All patients seen by the participating health care workers that came to the primary care facilities on the days of collecting data were included, while relatives or caregivers who accompanied the patients were excluded from the encounters

although they could assist with interpretation and mothers of children could give the RFEs, but data were not collected on them.

Because the participants/research assistants agreed to indicate their facilities and their names, it was possible to refer any data collection problems (e.g illegible handwriting) back to the participants concerned.

Also the data for this survey were collected over 10 months on different days of the week so that seasons and daily patterns can be accounted for.

3.8. DATA MANAGEMENT/ CODING OF DATA/ DATA CAPTURING

After each day of data collection, the participants would return the data sheets tothe researcher who ensured that the data were collected before the next collection date so that any detected mistakes could be corrected.

All the data sheets as well as each patient entry was allocated a unique number (1 to 6000). The RFEs were coded individually using the ICPC -2 coding system. This was done by the principal researcher, having undergone the coding training before the commencement of the study. This training was provided over three days by Prof Mash and other experienced researchers from the University of Stellenbosch in May 2009. Post training, there was a follow up support given by the trainers and interactions among my colleagues by having a web-based point of discussion on an on-going basis.

ICPC-2 is a user-friendly coding system which represents various body systems with letters and the RFEs by two numbers. It is divided into 7 chapters ranging from symptoms through administration to diagnoses. It also indicates the criteria to be included and excluded in order to arrive at a correct code being allocated to various RFEs.

Where necessary, ICPC was adapted to local circumstances. For example Integrated Management of Childhood Illnesses (IMCI) is a commonly used strategy in child health amongst under 5 year olds in this province, when the IMCI suggested an assessment of ‘ cough or cold’, it was taken to mean Upper respiratory tract infections (URTIs) - (coded R74 on ICPC system))

All the coded data were captured on a Microsoft Excel spread sheet by the principal researcher and an assistant, who was a graduate and had a basic knowledge of research. What was captured by her was intermittently/ randomly cross-checked to ensure that actual captured data corresponded to the raw data.

3.9. ASSUMPTIONS

In differentiating between complicated (K87) and uncomplicated hypertension (K86), those patients with co-morbidity of diabetes, asthma and those with indicated complications like retinopathy, congestive cardiac failure, or those with asthma as a co-morbidity, inter alia were coded as being complicated. With respect to diabetes mellitus (DM), those above 40 years of age are regarded to be type 2 diabetes unless there was enough information from the patient's medical record detailing when the patient was first diagnosed in which case it would be possible to diagnose type 1 diabetes. This age cut-off point was chosen based on the knowledge that type 2 diabetes mellitus is most common during the middle age and later life.[27] Moreso, almost all patients with DM aged 40 and above are on oral hypoglycaemics (management for type 2 diabetes mellitus) for which they come to the primary care to collect on a monthly basis.

3.10. DATA ANALYSIS

The captured data were analysed (with the help of the statistician at the Centre for Statistical Consultation, University of Stellenbosch) using frequency distribution tables and Mann-Whitney U Test as well as Kruskal – Wallis test with the findings ranked by Kruskal – Wallis Rank ANOVA. Both tests are used to determine if a difference exists between two or more groups and are dependent on random selection of subjects into their respective groups. They are statistical analytic test for analysis of variance (ANOVA).

3.11. ETHICAL CONSIDERATIONS

Ethical approval for the study was obtained from the Human Research Ethics Committee of the Faculty of Health Sciences, University of Stellenbosch. The Provincial Department of Health in the North West was approached for permission. Consent was also sought from each selected health facility as well as from each participating health providers.

Given that the survey did not involve administering an intervention, the information we collected was not dissimilar from data collection forms routinely used for capturing consultation information, although that information is rarely captured, compiled or analyzed. No special consent was obtained from the patients and for this reason, no patient's name or other unique identifier was recorded on the capture sheet. Patient confidentiality and autonomy was ensured.

4. RESULTS

4.1. DEMOGRAPHIC CHARACTERISTICS OF PATIENTS

During the study, 5082 patient encounters were recorded across all the facilities utilised. Of these, 67.7% (n = 3438) were females and 32.3% (n = 1644) were males ($p < 0.05$). (TABLE II, FIGURE I) Most encounters were made with children under 5 years of age.

Of all the encounters, 99.6% (n = 5063) were captured by the nurses while only 0.4% (n = 19) were captured by doctors.

TABLE II – AGE CATEGORY AND GENDER DISTRIBUTION OF THE ENCOUNTERS (N=5082)

Age category (Years)	**Female n(%)**	**Male n(%)**	**Total n(%)**
0-9	541 (10.6)	516 (10.2)	1057 (20.8)
10- 19	306 (6.0)	130 (2.6)	436 (8.6)
20-29	821 (16.2)	198 (3.9)	1019 (20.1)

30-39	667 (13.1)	239 (4.7)	906 (17.8)
40-49	436 (8.6)	199 (3.9)	635 (12.5)
50-59	357 (7.0)	184 (3.6)	541 (10.6)
60-69	198 (3.9)	119 (2.3)	317 (6.2)
70-79	73 (1.4)	46 (1.0)	119 (2.4)
>80	39 (0.8)	13 (0.2)	52 (1.0)
Total	3438 (68.0)	1644 (32.0)	5082(100.0)

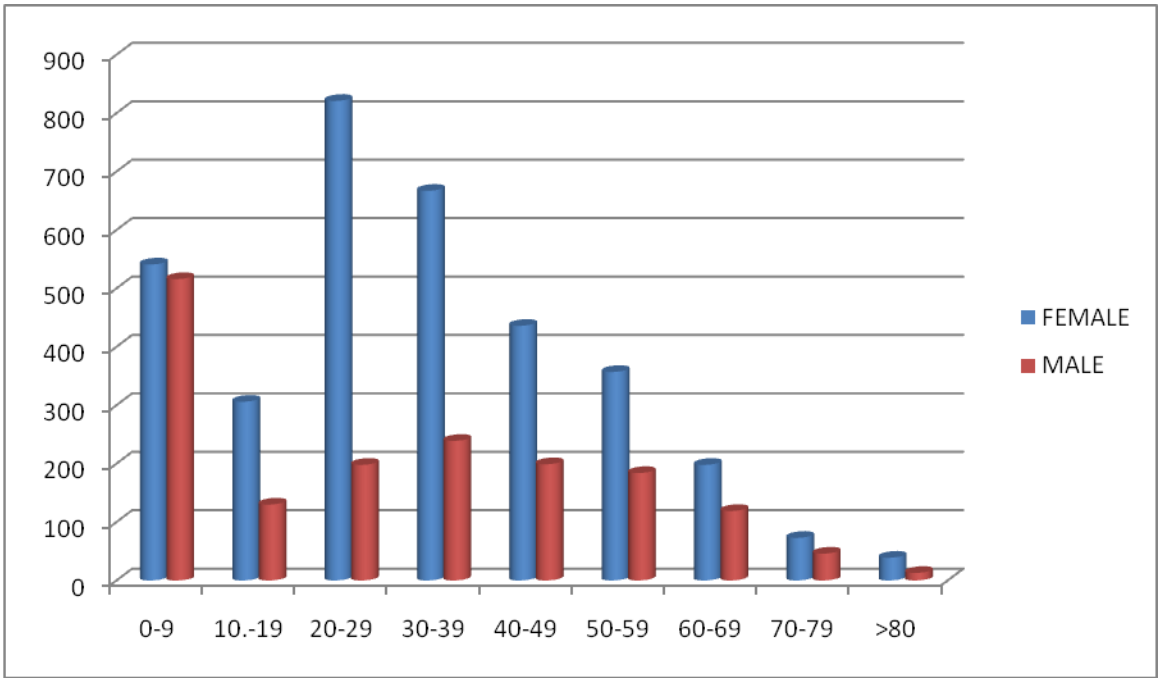

FIG URE I - GENDER DISTRIBUTION VS AGE CATEGORIES OF ENCOUNTERS

After childhood, males and females show a different pattern of distribution. Females peak in the age group 20-29 years and then gradually decrease, while males have a bell shaped curve that peaks in the age group 30-39 years.

4.2. NUMBERS OF RFE PER ENCOUNTER AND DIAGNOSES

There were different numbers of RFEs by the patients. Some came with just one RFE while others came with two or more RFEs. The same variation was observed in the number of diagnoses made by the participating health care workers (HCWs) per encounter. (TABLES III AND IV and FIG II).

TABLE III: FREQUENCY TABLE : DISTRIBUTION OF NUMBERS OF RFE PER ENCOUNTER

Number of RFEs	**Number of Patients**	**Percentage**
1	3611	71.0
2	912	18.0
3	429	8.4
4	111	2.2
5	19	0.4

TABLE IV – FREQUENCY TABLE : DISTRIBUTION OF DIAGNOSES PER ENCOUNTER

Number of Diagnoses	**Number of patients**	**Percentage**
1	4340	85.4
2	618	12.2
3	112	2.2
4	12	0.2
5	0	0.0

The maximum number of RFEs was 5 at 0.4% (n = 19) while the maximum diagnoses made by the HCWs was 4 at 0.2% (n = 12).

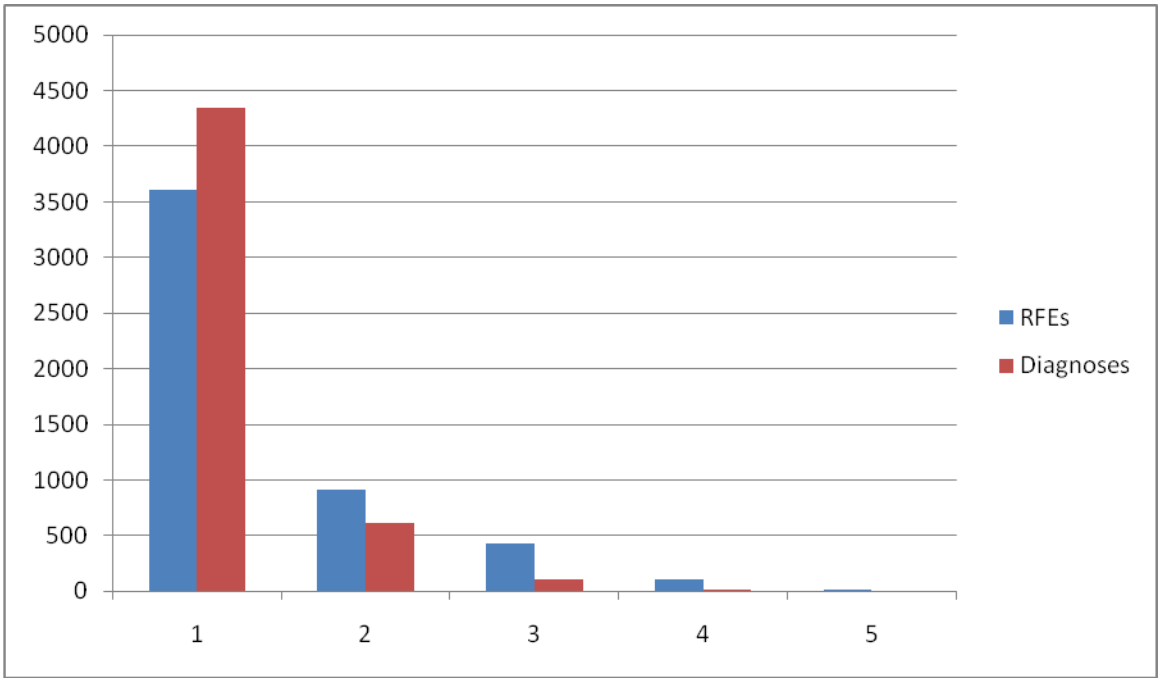

FIG II- RFEs AND DIAGNOSES FREQUENCE PER ENCOUNTER

In total, there were 7261 RFEs which translated to a mean of 1.4 RFE per encounter and 5959 diagnoses with a mean of 1.2 diagnoses per encounter.

4.3 FREQUENCY OF OCCURENCE - RFEs

The frequency of occurrence of the RFEs varied considerably across the different organ-system ICPC chapters (TABLE V).

TABLE V – FREQUENCY OF OCCURRENCE OF RFE PER ICPC CHAPTER

Component	**Value**	**Percentage**
A - General and unspecified	1202	16.6
B - Blood, Blood forming organs and Immune Mechanism	495	6.8
D – Digestive	537	7.4
F - Eye	105	1.5
H – Ear	82	1.1

K – Cardiovascular	882	12.1
L – Musculoskeletal	456	6.3
N – Neurological	529	7.3
P – Psychological	76	1.1
R – Respiratory	1066	14.7
S – Skin	236	3.2
T – Endocrine/Metabolic and Nutrition	391	5.4
U – Urological	98	1.3
W – Pregnancy, Childbearing, family planning	796	11.0
X – Female Genital	256	3.5
Y – Male Genital	29	0.4
Z – Social problems	25	0.3
TOTAL	7261	100.0

From the table, the commonest category was the general chapter followed by the respiratory chapter in the second place followed by cardiovascular in third place with reproductive coming 4^{th} and in 5^{th} place by digestive system. The component with the least complaint was the psychosocial problem chapter.

On further analysis of the general component, the findings revealed childhood immunization to be the commonest RFE under the component at 28% (n =337); female being 174 (51.6%) and male 163 (48.4%). The second main RFE under the general component was collection of Tuberculosis (TB) medication which totalled 275 (23%) while in 3rd place was fever at 21% (n=247).

4.4 – MOST COMMON INDIVIDUAL RFEs

Individually, certain RFEs occur more commonly than the others. The top 20 most common RFEs are illustrated below: (TABLE VI)

TOP 20 RFEs IN DESCENDING ORDER (TABLE VI)

Rank	**RFE**	**Value**	**Percentage**
1	K50, Hypertensive medication	813	11.2
2	RO5, Cough	532	7.3
3	A44, Preventive immunization	337	4.6
4	B50, Collection of medication relating to blood and blood forming organs e.g. Antiretrovirals	329	4.5
5	W14, Contraception	276	3.8
6	A50, Medication for general and unspecific problem	275	3.8
7	N01, Headache	274	3.8

8	A03, Fever	247	3.4
9	W31, Antenatal care	215	3.0
10	W64, Encounter initiated by the provider	168	2.3
11	T50, Medication for endocrine problems	161	2.2
12	N50, Medication for neurological problems	133	1.8
13	T03, Loss of appetite	120	1.7
14	R08, Nose symptom/complaint other	109	1.5
15	R50, Medication for respiratory problems	101	1.4
16	D06, Abdominal pain localised other	98	1.3
17	N17, Vertigo/dizziness	98	1.3
18	B34, Blood test	88	1.2
19	R02, Shortness of breath/dyspnoea	88	1.2
20	A01, Pain general/multiple sites	87	1.2

4.5 FREQUENCY OF DIAGNOSES

The most commonly diagnosed chapter in ICPC was the general chapter being followed by cardiovascular in second place and in third place by respiratory. The least diagnosed component was the male genital problem. (TABLE VII and FIGURE III)

TABLE VII – DIAGNOSES FREQUENCY TABLE

Component	**Value**	**Percentage**
A - General And Unspecified	981	16.5
B - Blood, Blood forming organs and Immune Mechanism	578	9.7
D – Digestive	230	3.9
F - Eye	64	1.1
H – Ear	59	1.0
K – Cardiovascular	951	16.0
L – Musculoskeletal	301	5.1
N – Neurological	220	3.7
P – Psychological	83	1.4
R – Respiratory	865	14.5
S – Skin	195	3.3
T – Endocrine/Metabolic and Nutrition	290	4.9

U – Urological	48	0.8
W – Pregnancy, Childbearing, family planning	850	14.3
X – Female Genital	193	3.2
Y – Male Genital	21	0.4
Z – Social problems	31	0.5
TOTAL	5959	100.0

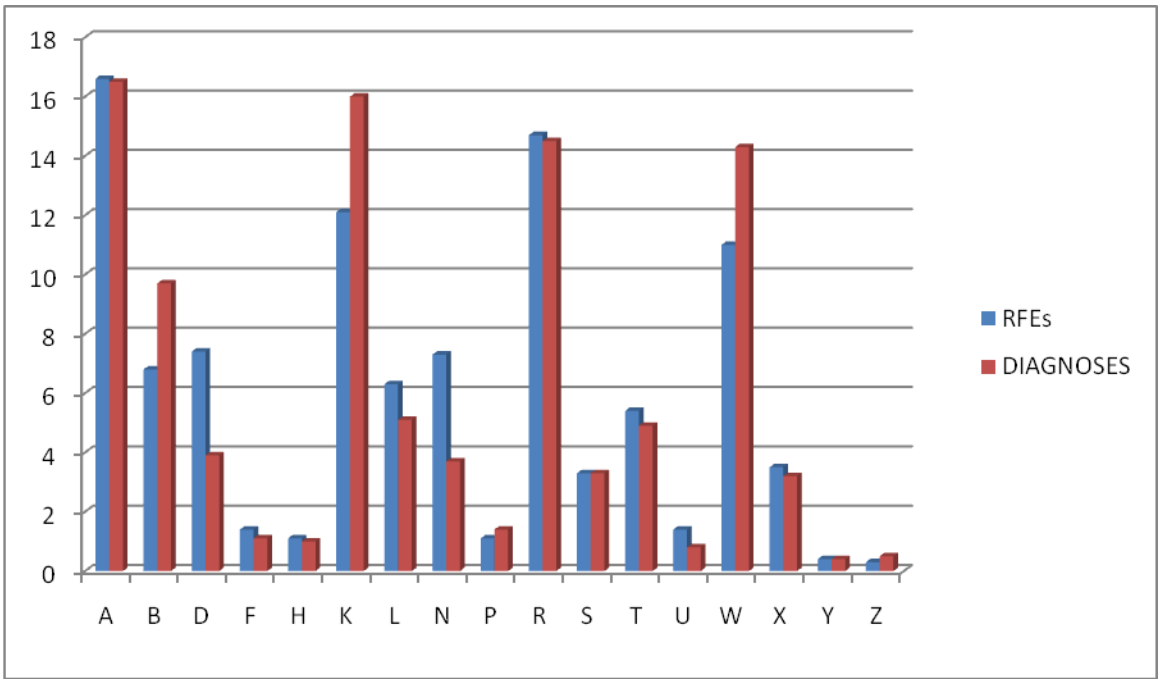

FIGURE III - RFEs AND DIAGNOSES – COMPARISON OF THE FREQUENCY OF CODES WITHIN ICPC CHAPTERS

4.6 – COMMON INDIVIDUAL DIAGNOSES

The top 20 individual diagnoses are indicated below (TABLE VIII)

TABLE VIII - TOP 20 INDIVIDUAL DIAGNOSES

RANK	DIAGNOSES	VALUE	PERCENTAGE
1	K86 , Hypertension uncomplicated	692	11.6
2	B90 , HIV infection/AIDS	522	8.8
3	A70 , Tuberculosis	451	7.6
4	W78 , Pregnancy	345	5.8
5	A98 , Health maintenance/prevention	319	5.4
6	W14 , Contraception others	291	4.9
7	R74 , Upper Respiratory Tract Infections (URTI)	278	4.7
8	T90 , Type 2 diabetes	193	3.2
9	K87 , Hypertension complicated	188	3.2
10	N88 , Epilepsy	139	2.3
11	R96, Asthma	130	2.2
12	R76, Tonsillitis acute	116	1.9
13	L18, Muscle pain	80	1.3
14	W78, Pregnancy	65	1.1
15	X74, Pelvic	57	1.0

	inflammatory disease		
16	L20, Joint symptom/complaint	54	0.9
17	R80, Influenza	52	0.9
18	D11, Diarrhoea	51	0.9
19	A78, Sexually transmitted infection / Infectious disease other	43	0.7
20	L91, Osteoarthrosis other	41	0.7

From the above table, hypertension (both uncomplicated and complicated) is of high prevalence. HIV/AIDS (B90) as coming second in diagnoses is of great concern.

4.7. RFEs AND DIAGNOSES AMONG UNDER 5 YEARS

Children under 5 years of age are prone to high morbidity and mortality. The commonest RFEs and diagnoses in this age group is therefore important (TABLE IX).

TABLE IX: RFEs DISTRIBUTION AMONG UNDER 5s - TOP 20

	RFEs	N (%)
1	A44 , Preventive immunisations/Medications	319 (28)
2	R05, Cough	167 (14.7)
3	A03, Fever	125 (11.0)
4	T03, Loss of appetite	48 (4.2)
5	A50, Medical –	44 (3.9)

	Script/Request/Renewal e.g Collection of TB treatment	
6	A31, Medical Examination/Health Evaluation relating to general component e.g. Weight Assessment	36 (3.2)
7	D11, Diarrhoea	35 (3.1)
8	T31, Medical Examination/Health Evaluation relating to endocrine component e.g. nutritional assessment	33 (2.9)
9	D10, Vomiting	29 (2.5)
10	R08, Nose symptom/complaint e.g blocked nose	28 (2.5)
11	B34, Blood test relating to Blood, Blood forming organs and immune mechanism	21 (1.8)
12	R04, Other breathing problem e.g. fast breathing	18 (1.6)
13	S06, Localised skin rash	17 (1.5)
14	R02, Shortness of breathing/Dyspnoea	14 (1.2)
15	R07, Sneezing/Nasal congestion	12 (1.1)
16	S07, Generalised skin rash	11 (1.0)
17	D20, Mouth/Tongue/Lip symptom/complaint	8 (0.7)
18	H04, Ear discharge	8 (0.7)
19	A99, General disease not otherwise classified	7 (0.6)
20	F03, Eye discharge	7 (0.6)

TABLE X: COMMON DIAGNOSES – UNDER -5

	DIAGNOSES	N (%)
1	A98, Health maintenance/Prevention relating to general component	338 (38.0)
2	R74, Acute upper respiratory tract infection	101 (11.4)
3	R81, Pneumonia	74 (8.3)
4	A70, Tuberculosis	55 (6.2)
5	T07, Weight gain	34 (3.8)
6	B90, HIV – infection/AIDS	27 (3.0)
7	D11, Diarrhea	25 (2.8)
8	T91, Vitamin/Nutritional deficiency	18 (2.0)
9	A03, Fever	13 (1.5)
10	H71, Acute otitis media/myringitis	12 (1.4)
11	R76, Acute Tonsillitis	8 (0.9)
12	A99, General disease not otherwise classified	7 (0.8)
13	D83, Mouth/Tongue/Lip disease	7 (0.8)
14	R83, Respiratory infection-others e.g. chronic rhinitis	6 (0.7)
15	S74, Dermatophytosis	6 (0.7)
16	S87, Dermatitis/atopic eczema	6 (0.7
17	A78, Infectious disease other	5 (0.6)

18	A72, Chickenpox	4 (0.4)
19	S76, Other skin lesion e.g pyoderma	4 (0.4)
20	S99, Skin disease, other	4 (0.4)

4.8 NUMBER OF ENCOUNTERS PER DAY OF THE WEEK IN THE MONTH OF COLLECTION

There were variations in the number of encounters during different days of the week and the period of the year (TABLE XI)

TABLE XI – NUMBER OF ENCOUNTERS PER DAY OF DATA COLLECTION

DAY	MONTH	NUMBER (N)	PERCENTAGE (%)
MON	AUGUST	1280	25.2
TUES	OCTOBER	1170	23.0
WEDS	DECEMBER/JANUARY	579	11.4
THURS	MARCH	1279	25.2
FRIDAY	MAY	774	15.2

The least number of encounters recorded was in December/ January and this was most likely due to the holiday season, which would have affected both staff and patients

5. DISCUSSION

KEY FINDINGS OF THIS STUDY

The commonest individual RFE was patients coming to collect treatment for hypertension, complaining of cough or requesting childhood immunisation. This is not similar to the findings of the study done in Mthatha where the top 3 RFEs were cough, headache and skin complaints.[1] While in similar study conducted in china revealed Cough, vertigo and fever to be the commonest RFEs.[16]

The commonest individual diagnoses were uncomplicated hypertension, HIV/AIDs and TB. This is in partial agreement with above Chinese study where it came as the second most common diagnosis.[16]

The high frequency of hypertension among the patient encounters could be due to monthly visit for review and collection of treatment. It could also be due to changing lifestyle brought about by urbanisation, sedentary lifestyle and culturally embracing attitude towards obesity among the community of the province.[28]

Cough was the second most common symptom recorded, which could be a symptom of URTI and contributed to TB diagnoses in this study, making general and unspecific component to be first on the list of diagnoses as TB is coded under the general component in ICPC rather than under respiratory chapter. TB, coming third in this study at 8.9% of all encounters could be attributed to increasing TB notification, improved reporting and the fact that they make multiple visits.[29] This is different from the findings of similar study done in Mthatha where the frequency of TB among their encounters was 3%. However, this frequency of 8.9 observed in this survey represents high burden of care for TB when compared with the national prevalence of about 1000/100 000 (1.0%) South Africans in 2006 which was construed to be the worst prevalence in the world according to the global TB report released in Geneva in March 2008.[30]

Diseases related to the digestive system came in the eighth place in diagnoses as opposed to the fifth place in the RFE, which could be due to the fact that some of the abdominal pain might not be due to digestive system problems per se, but could be due to dysmenorrhoea,

labour (reproductive/ women genital problem), urinary tract infection or musculoskeletal problems. It is therefore not surprising that more diagnoses relating to Pregnancy, Childbearing and family planning were made as compared to the digestive ICPC chapter (n = 850 vs n = 230).

The observed picture, of a high burden of HIV/AIDS amongst women (almost twice that of males), could be due to higher rates of diagnoses during antenatal care (ANC). However the overall HIV frequency in this study is low when compared to the prevalence of HIV/AIDS in the province (11.3% in 2008).[31] This low frequency could be due to the fact that there is under reporting of HIV status and the fact that treatment for HIV is only available at designated centres in the district, which at the moment are the hospitals {(Mafikeng Provincial Hospital wellness clinic, General De La Rey (GDLR) hospital, Zeerust Hospital)} with very few primary care facilities allowed to follow up. Hopefully with the imminent decentralisation and permission to allow initiation of Highly Active Anti-retroviral therapy (HAART) by nurses at primary level, the picture may be different in the future.

RFEs and diagnoses related to male genital problems were low. This could be explained by the fact that those men who come may not feel free to open up or the health care workers are not comfortable to talk around, examine or diagnose such problem - as most data collectors were women (socio-cultural influence/problem). However this finding is akin to those found in previous similar studies where it comes among the least common RFEs and diagnoses.[1,16]

The least common complaint was of psychosocial problems. This could be due to the fact that health facilities are seen as a place for getting treatment for medical as opposed to social problems or as a result of the biomedical orientation of the health care workers (HCWs), which does not recognise psychosocial issues.

With respect to the age category distribution, children under-5years comprised the majority of the diagnoses and RFEs. This is not surprising as immunisation, which is esteemed an obligation by the department of health (DOH) and parents, contribute a very high percentage to the pool.

The vast majority of the encounters were captured by the nurses, which is not surprising as most of the clinics within our districts are staffed by clinical nurse practitioners and not doctors.[31] Doctors only visit primary care facilities infrequently. Most of the visiting doctors are private general practitioners who visit on a sessional basis.

COMPARISON TO THE LITERATURE

Women made up over two-thirds of all encounters during this survey (67.7%), which is relatively high compared with most other studies previously conducted; although it is a consistent finding that women make up more of the encounters than men. In the Soweto survey, women made up 59% of the encounters .[10] Chinese studies of a similar nature reported females to be 53%.[16] Equivalent figures were also found in a similar study done in Paris and French-speaking part of Belgium and in the USA (60%).[11,14] Equally similar findings were obtained in a similar study done in Finland with results showing 67.8% were women and 32.2% being men.[32] This findings does not reflect the gender distribution in the province or the district.

The lower levels of contact with health services by men in this province could be explained by emigration where men seek employment far away from home. High female attendance may be explained by a demand for birth control and pregnancy-related reasons. Possibly it is more culturally acceptable for women to attend health care facilities for reproductive health services or for other reasons which may not necessarily be due to sickness like family planning or termination of pregnancy.[1]

Overall, there was a high concordance between RFEs and HCWs diagnoses. Apart from some of the patients presenting with cough (respiratory component) being diagnosed with TB (general and unspecific component), majority of patients were diagnosed in the component with which they presented. This is in agreement with a study done amongst patients and family physicians in Europe and those studies done in Australia.[15,33]

LIMITATIONS OF THE STUDY

This study is limited by the fact that the data were collected at primary care facilities at one district of the 4 districts in the province. District like Bojanala which houses Rustenburg, the mining and economic power of the province, where most males in the province sought for employment, if sampled, may give a different picture.

6. RECOMMENDATIONS

This study reveals that the burden of both communicable (e.g TB and HIV/AIDs) and non-communicable diseases (e.g hypertension) is very high among the patients attending our primary care facilities in the province. Thus there is need to embark on preventive measures and health promotion to curb this scourge. This should be given the needed priorities by the policy makers. More so, any health care workers in our primary care facilities should be versed in managing these conditions, among others. Management of these common conditions should be given high priority by our training institutions as well.

Child health also featured prominently as one of the top common encounters in this study. This is evident by the fact that the age group 0-9 account for 20.8% of all encounters. It goes without saying that good knowledge of child health should be of paramount imperative in our primary care facilities.

Violence and injury, which are other contributors to the burden of disease in general do not contribute a great deal in this study. This could be due to the fact that most trauma such as motor vehicle accident(MVA)s, sexual assault are often taken directly to the emergency and casualty department of the hospital for treatment . Thus if a study including hospitals is undertaken, the picture with respect to trauma and violence may give a different picture of contribution.

In addition, strategies to prevent high blood pressure and other non-communicable diseases as well as their complications should be promoted. This includes promoting good eating habits, early diagnosis through routine screening, community health education and outreaches as well as proper management of hypertensive patients once the correct diagnosis is made.

7. CONCLUSION

From this study, the range and prevalence of reasons for encounter and diagnoses found among patients attending public primary care facilities in the North West Province were evident. We found that different categories of patients attend our primary care facilities with a varied mix of reasons that include clinical complaints, collection of treatment for chronic diseases, preventive and health maintenance,

with very few attending for administrative and psychosocial reasons. Most of the patients were attended to by the nurses.

Most of the attendees were female and in younger age groups. There were low levels of psychological and social problems diagnosed, possibly because of under-reporting or the failure of patients to present with such problems or the HCWs to appreciate the non-verbal cues which are often the pointers to diagnosing such problems.

There were few complaints with regards to male genitals albeit more diagnoses related to that component were made. Children <5 years old attended for myriads of reasons but immunisation was the main reason contributing to them being the age group with highest frequency of attendance. With regards to HIV/AIDS, more females were diagnosed to have it compared with men.

These findings helped us to examine trends in various RFEs and gaps in primary health care services delivery in the North West province. A further study to ascertain why so few men and elderly attend the facilities would be of importance.

From the findings of this survey, health care workers working at our primary care facilities should be equipped with adequate knowledge and skills in the management of hypertensive disorders, TB and HIV/AIDS.

The ICPC-2 proved to be practicable, user-friendly in this setting, and it can be used more widely in practice to determine various RFEs and diagnoses at our various primary care facilities. There were no conflicts of interest.

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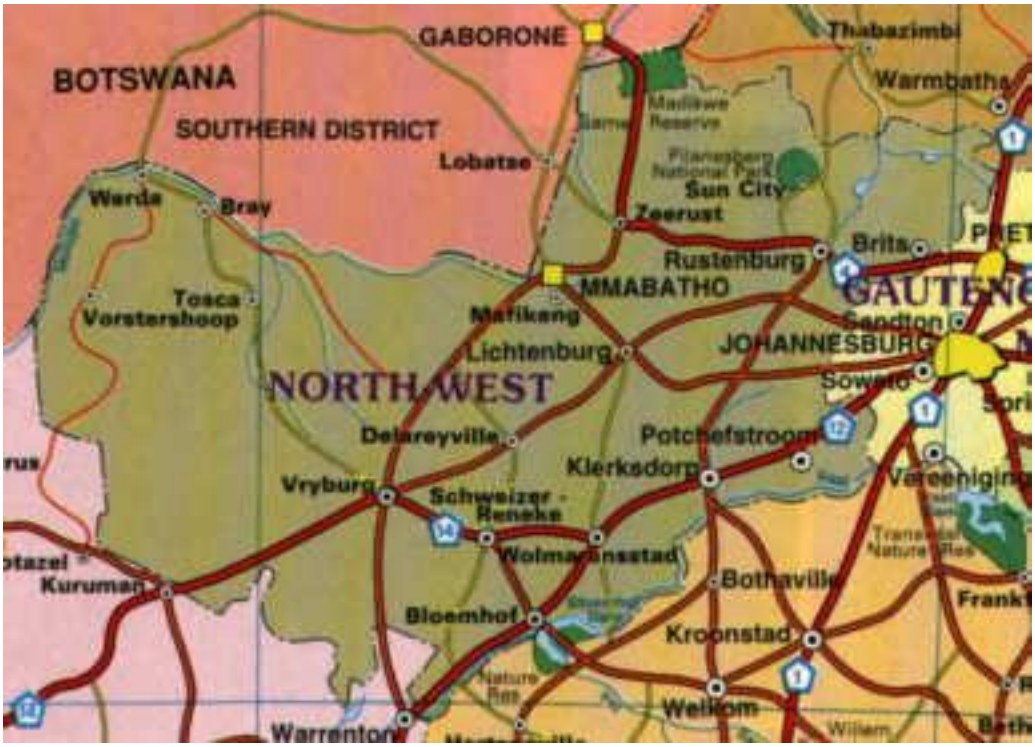
APPENDIX A – MAP OF NORTH WEST PROVINCE



APPENDIX B - FACILITIES CODE

- A - MAUREEN ROBERTS MEMORIAL CLINIC .
- B – TLHABOLOGANG CLINIC
- C – UNIT 9 CLINIC .
- D – RAMMATLABAMMA CLINIC
- E – BODIBE CHC
- F – MONTSHIOA TOWN CLINIC .
- G – KRAAIPAN CLINIC
- H – DISANENG CLINIC
- I – MOKGOLA CLINIC
- J – MAFIKENG GATEWAY CLINIC .
- K – MONTSHIOA STADT CHC
- L – DINOKANA CLINIC
- M – COLIGNY CHC
- N – TSHIDILAMOLOMO CLINIC
- 0 – BOIKHUTSO CLINIC
- P – RATLOU CHC
- Q – MADIBOGO MOBILE CLINIC
- R – MOCOSENG CLINIC
- S – LOTLAKENG CLINIC
- T – SETLHAGOLE CLINIC
- U – GOPANE CHC
- V – LEKOKO CLINIC
- W – LOGOGENG CLINIC
- X – MASAMANE CLINIC

APPENDIX C

COPY OF THE INSTRUMENT – DATA COLLECTION SHEET

Facility's name_____Section(e.g. TB clinic)_____ Day (cicle day): M/TU/W/TH/F

Health worker's name_____Captured by (tick): Doctor / Nurse Date_____

	Age	**Sex**	**Reason(s) for encounter** (maximum 5)	**Diagnosis(es)** (maximum 5)
1				
2				
3				
4				
5				
6				

7				
8				
9				
10				

APPENDIX D – ICPC CODING SYSTEM – 2 - SAMPLE

WONCA ICPC-2 CODES ©

A GENERAL

A01 Pain generalized
A02 Chills
A03 Fever
A04 General weakness/tiredness
A05 Feeling ill
A06 Fainting/syncope
A07 Coma
A08 Swelling (excl K07)
A09 Sweating problems
A10 Bleeding site unspecified
A11 Chest Pain NOS
A13 Concern/Fear about treatment
A16 Concern about appearance
A20 Euthanasia request/discussion
A21 Risk Factor for malignancy
A22 Risk factor NOS
A25 Fear of death
A26 Fear of cancer NOS
A27 Fear of other disease NOS
A28 Limited function/disability NOS
A29 Other general sympt/complt
A70 Tuberculosis generalized (excl R70)
A71 Measles
A72 Chickenpox
A73 Malaria
A74 Rubella
A75 Infectious mononucleosis
A76 Other viral dis with exanthems
A77 Other viral diseases NOS
A78 Other infectious diseases NOS
A79 Carcinomatosis(unkn prim site)
A80 Accident/injury NOS
A81 Multiple trauma/internal inj
A82 Late effect of trauma
A84 Poisoning by medical agent
A85 Adv effect med agent proper dose
A86 Toxic effect other substances
A87 Complicat surg/med treatment
A88 Adv effects phys factors (excl H85)
A89 Effect prosthetic device
A90 Multiple cong anomalies
A91 Abnormal results investig NOS
A92 Allergy/allergic reaction
A93 Premature/immature newborn
A94 All other perinatal morbidity
A95 Perinatal mortality
A96 Death (excl perinatal)
A97 No disease
A98 Health maintenance/Preventive Medicine
A99 Other general/unspec diseases

B BLOOD & IMMUNE MECHANISMS

B02 Enlarged lymph gland(s)
B04 Sympt blood/lymph organs
B25 Fear of AIDS
B26 Fear cancer of blood/lymph org
B27 Fear other blood/lymph disease
B28 Limited function/disability
B29 Other sympt blood/spleen NOS
B70 Acute lymphadenitis
B71 Chronic/non spec lymphadenitis
B72 Hodgkins disease
B73 Leukemia
B74 Other malignant neoplasms
B75 Benign/unspec neoplasms
B76 Ruptured spleen
B77 Other injuries
B78 Hereditary hemolytic anemias
B79 Other congenital anomalies
B80 Iron deficiency anemia
B81 Pernic/folate deficiency anemias
B82 Anemia other/unspecified
B83 Purpura/coag defects/abn plate
B84 Abnormal white cells
B87 Splenomegaly
B90 HIV-infection (AIDS/ARC)

D16 Rectal bleeding
D17 Incontinence of bowel
D18 Change in feces/bowel movements
D19 Sympt/complt teeth/gums
D20 Sympt/complt mouth/tongue/lip
D21 Swallowing problems
D23 Hepatomegaly
D24 Abdominal mass NOS
D25 Change in abd size/distension
D26 Fear of cancer of digest system
D27 Fear of other digestive disease
D28 Limited function/disability
D29 Other sympt/complt digestive
D70 Infectious diarrhea/dysentery
D71 Mumps
D72 Viral hepatitis
D73 Presumed GI infection
D74 Malignant neoplasm stomach
D75 Malignant neoplasm colon/rectum
D76 Malignant neoplasm pancreas
D77 Malignant neoplasm other/unspec
D78 Benign neoplasms
D79 Foreign body through orifice
D80 Other injuries
D81 Congenital anomalies
D82 Disease of teeth/gums
D83 Disease of mouth/tongue/lips
D84 Disease of esophagus
D85 Duodenal ulcer
D86 Other peptic ulcers
D87 Disorder stomach function
D88 Appendicitis
D89 Inguinal hernia
D90 Diaphragmatic/hiatus hernia
D91 Other abdominal hernias
D92 Diverticular disease
D93 Irritable bowel syndrome
D94 Chronic enteritis/ulcerat colitis
D95 Anal fissure/perianal abscess
D96 Worms
D97 Cirrhosis/other liver disease
D98 Cholecystitis/cholelithiasis
D99 Other diseases digestive system

F EYE

F01 Eye pain
F02 Red eye
F03 Discharge from eye
F04 Visual floaters/spots
F05 Oth visual sympt/compl (excl F94)
F13 Abnormal sensations in eye
F14 Abnormal eye movements
F15 Abnormal appearence of eyes
F16 Symptoms/complaints of eyelids
F17 Symptoms/complaints glasses
F18 Sympt/complt contact lens
F27 Fear of eye disease
F28 Limited function/disability
F29 Other sympt/complt of eye
F70 Infectious conjunctivitis
F71 Allergic conjunctivitis
F72 Blepharitis/stye/chalazion
F73 Oth inf/inflam of eye (excl Herpes)
F74 Neoplasms of eye/adnexa
F75 Contusion/hemorrhage eye
F76 Foreign body in eye
F79 Other injuries
F80 Blocked lacrimal duct of infant
F81 Other congenital anomaly eye
F82 Detached retina
F83 Retinopathy
F84 Macular degeneration
F85 Corneal ulcer (incl herpetic)
F86 Trachoma
F91 Refractive errors
F92 Cataract
F93 Glaucoma
F94 Blindness all degrees/types
F95 Strabismus

H75 Neoplasm of ear
H76 Foreign body in ear
H77 Perforation tymp membrane
H78 Superficial injury of ear
H79 Other injuries
H80 Congenital anomalies of ear
H81 Excessive ear wax
H82 Vertiginous syndromes
H83 Otosclerosis
H84 Presbyacusis
H85 Acustic trauma
H86 Deafness all degrees NOS
H99 Other diseases of ear/mastoid

K CIRCULATORY

K01 Pain attributed to heart
K02 Measuring/illness attr to heart
K03 Other pain attr to circulation
K04 Palpitations/aware of heartbeat
K05 Other abn/irreg heartbeat/pulse
K06 Prominent veins
K07 Swollen ankles/edema
K22 Risk factor for cardiovascular disease
K24 Fear of heart attack
K25 Fear of hypertension
K27 Fear other disease circ system
K28 Limited function/disability
K29 Other sympt heart/circ system
K70 Infectious dis circ system
K71 Rheumatic fever/heart disease
K72 Neoplasm circ system
K73 Cong anomalies heart/circ syst
K74 Ischaemic heart disease with angina
K75 Acute myocardial infarction
K76 Ischaemic heart disease w/out angina
K77 Heart failure
K78 Atrial fibrillation/flutter
K79 Paroxysmal tachycardia
K80 Cardiac arrythmia NOS
K81 Heart/arterial murmer NOS
K82 Pulmonary heart disease
K83 Heart valve dis non-rheum NOS
K84 Other disease of heart
K85 Elevated BP (excl K86 K87)
K86 Uncomplicated hypertension
K87 Hypert with involv targ organs
K88 Postural hypotension
K89 Transient cerebral ischaemia
K90 Stroke/cerebrovasc accident
K92 Atherosclerosis/periph vasc dis
K93 Pulmonary embolism
K94 Phlebitis/thrombophlebitis
K95 Varicose veins of legs (excl S97)
K96 Hemorrhoids
K99 Other dis circulatory system

L MUSCULOSKELETAL (LOCOMOTION)

L01 Neck sympt/complt excl headache
L02 Back symptoms/complaints
L03 Low back complt excl radiation
L04 Chest symptoms/complaints
L05 Flank/axilla symptoms/complaints
L07 Jaw symptoms/complaints
L08 Shoulder symptoms/complaints
L09 Arm symptoms/complaints
L10 Elbow symptoms/complaints
L11 Wrist symptoms/complaints
L12 Hand & finger symptoms/complt
L13 Hip symptoms/complaints
L14 Leg/thigh symptoms/complaints
L15 Knee symptoms/complaints
L16 Ankle symptoms/complaints
L17 Foot & toe symptoms/complaints
L18 Muscle pain/fibrositis
L19 Other s/c multiple/unspec muscles
L20 Sympt multiple/unspec joints
L26 Fear of cancer
L87 Bursitis/tendonitis/synovitis NOS
L88 Rheumatoid arthrit/allied cond
L89 Osteoarthritis of hip
L90 Osteoarthritis of knee
L91 Other osteoarthritis
L92 Shoulder syndrome
L93 Tennis elbow
L94 Osgood-Schlatter/osteochondros
L95 Osteoporosis
L96 Acute dam meniscus knee
L97 Neoplasm, benign/uncertain
L98 Acquired deformities of limbs
L99 Oth dis musculoskeletal system

N NEUROLOGICAL

N01 Headache (excl N02 N89 R09)
N03 Pain face
N04 Restless leg syndrome
N05 Tingling fingers/feet/toes
N06 Oth sensa distur/ab invol mov
N07 Convulsions/seizures
N08 Abnormal involuntary movements
N16 Disturbance of smell/taste
N17 Vertigo/dizziness (excl H82)
N18 Paralysis/weakness (excl A04)
N19 Disorder speech
N26 Fear of cancer neurol system
N27 Fear of other neurol disease
N28 Limited function/disability
N29 Other sympt/complt neurol system
N70 Poliomyelitis/oth enterovirus
N71 Meningitis/encephalitis
N72 Tetanus
N73 Other infect neurol system
N74 Malignant neoplasms
N75 Benign neoplasms
N76 Unspec neoplasms
N79 Concussion
N80 Head injury, other
N81 Other injuries
N85 Congenital anomalies
N86 Multiple sclerosis
N87 Parkinsonism
N88 Epilepsy all types
N89 Migraine
N90 Cluster headache
N91 Facial paralysis/Bells palsy
N92 Trigeminal neuralgia
N93 Carpal tunnel syndrome
N94 Other peripheral neuritis
N95 Tension headache
N99 Oth dis of neurol system

P PSYCHOLOGICAL

P01 Feeling anxious/nervous/tense
P02 Acute stress/trans/situat disturb
P03 Feeling depressed
P04 Feeling/behaving irritable
P05 Feeling/behaving old/senile
P06 Disturbances of sleep/insomnia
P07 Inhib/loss sexual desire
P08 Inhib/loss sexual fulfilment
P09 Concern sexual preference
P10 Stammering/stuttering/tics
P11 Eating problems in children
P12 Bedwetting/enuresis (excl U04)
P13 Encopresis
P15 Chronic alcohol abuse
P16 Acute alcohol abuse
P17 Tobacco abuse
P18 Medication abuse
P19 Drug abuse
P20 Disturb memory/concentration
P22 Oth concern behavior childhood
P23 Oth concern behavior adolescence
P24 Specific learning problems
P25 Phase of life problem adult